

Work Order ID 139002

Friday, November 13, 2015 11:16:09 AM

139002

Page 1

Item ID: D3319-3 Accept ***N19000040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Full Length Wearplate
 Start Date: 11/13/2015 Start Qty: 6.00 ***10**
 Required Date: 11/13/2015 Req'd Qty: 6.00 ***10** SK
 Reference: Cust Item ID:
 Customer:

Approvals: Process Plan: MLS Date: NOV 17 2015 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3319	C								
100	FLOW WATER JET	0.00							
100									
Waterjet	Memo	0.02							
FLOW CNC Waterjet	1-Cut as per Dwg D3319								
	Dwg Rev: <u>C</u>								
	Prog Rev: <u>C</u>								
	2-Deburr if necessary								
110	QC2- Inspect parts off machine FAI/FAIB	- 0.00							
110									
QC	Memo	0.00							
Quality Control									

(10) _____ DC 15/12/23
 (10) _____ DC 15/12/23

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

Work Order ID 139002***139002***

Friday, November 13, 2015 11:16:09 AM

Page 2

Item ID: D3319-3

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Full Length Wearplate

Start Date: 11/13/2015 Start Qty: 6.00

6

Cust Item ID:

Required Date: 11/13/2015 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

120

QC8- Inspect parts - second check

0.00

120

QC

Memo

0.00

Quality Control

DAS
9
9-89

(15) 15-12-23.

140

NC BRAKE

0.00

140

Brake NC

Memo

0.00

Brake NC

Form using DT8326 & DT8261 as per Dwg D3319Rev: CDAS
30
9-89

JAN 04 2016

(10)

150

QC6- Inspect dimensions to drawing

0.00

150

QC

Memo

0.00

Quality Control

DAS
38
9-89

JAN 04 2016

(10)

DQA: _____ Date: _____



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Work Order ID 139002

139002

Page 3

Item ID: D3319-3

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Full Length Wearplate

Start Date: 11/13/2015 Start Qty: 6.00

6

Cust Item ID:

Required Date: 11/13/2015 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

160

Weld per dwg A/R Hardcoat steel Batch: m130661 0.00

160

Large Fab

Memo

0.03

x 10 ME 16-01-05

Large Fab

Weld hard surface using D3319-3T2 per QSI 004 and Dwg D3319
Batch A/R 7560 Hardcoat Rod m130661

170

QC10- Inspect visual per QSI004- ground welds

0.00

170

QC

Memo

0.00

(15) 16-01-05

Quality Control

DAS
9
9-89

180

QC5- Inspect part completeness to step on W/O

0.00

180

QC

Memo

0.00

(15) 16-01-05

Quality Control

DAS
9
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order ID 139002

Friday, November 13, 2015 11:16:09 AM

139002

Page 4

Item ID: D3319-3 Accept *N900040100* Setup Start *NS1*
Revision ID: Stop *NS2*
Item Name: Full Length Wearplate
Start Date: 11/13/2015 Start Qty: 6.00 *6* Cust Item ID:
Required Date: 11/13/2015 Req'd Qty: 6.00 *6* Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3	0.00							
100	Powdercoat	0.00							
Powder Coating	Memo								
	START TIME: 7:45am								
	OVEN TEMPERATURE: 320°F								
	FINISH TIME: 8:15am								
200	QC3- Inspect Part Finish	0.00							
200									
QC	Memo	0.00							
Quality Control									
210	Packaging	0.00							
210									
Packaging	Memo	0.00							
Packaging	Identify on inside surface using a permanent fine point marker with the following: TCCA-PDA, Dart Aerospace Ltd.P/N: D3319-3, B/N: BXXXXX For Product Eligibility see PDA05-18 and Stock								
	Location: 3603								

x10 18/10/10

(10) DAS 38 9-89

JAN 06 2016

10 JAN 07 2016 DAS 6 9-89

JAN 06 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					

Work Order ID 139002***139002***

Page 5

Item ID: D3319-3

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Full Length Wearplate

Start Date: 11/13/2015 Start Qty: 6.00

6

Cust Item ID:

Required Date: 11/13/2015 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

220

QC21- Final Inspection - Work Order Release

0.00

220

QC

Memo

0.01

Quality Control

MLJ JAN 07 2016
MLJ JAN 07 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
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OTHER : ☐					

Picklist Print

Friday, November 13, 2015 11:16:09 AM

Page 1

Work Order ID: 139002

139002

Parent Item: D3319-3

D3319-3

Parent Item Name: Full Length Wearplate

Start Date: 11/13/2015

Required Date: 11/13/2015

Start Qty: 6.00

Required Qty: 6.00

Comments:

IPP: A05.05.12New issueKJ/JLM

IPP Rev:B Now on Waterjet 06-10-03 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M1010S18GA		Purchased	No			100	sf	131.3542	3.2524	20.54147			

M1010S18GA

1010/1025 SHEET .048

**

02/15/12/23

Location

Loc Qty

Loc Code

MAT019

131.354152

124428

3

m130454

0.3542

m132886

64

m133560

64

26.5

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																
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☐ Cracks	☐ Broken/Damage/Defect																																																																			
☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified																																																																			
☐ Cuffs	☐ Contamination																																																																			
☐ Crushing	☐ Countersink																																																																			
☐ Heat Treat	☐ Cut Too Short																																																																			
☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear																																																																			
☐ Marks/Chatter	☐ Drill Holes																																																																			
☐ Power Loss/Surge	☐ Positioned Wrong																																																																			
☐ Folio/Program	☐ Outside Dimensions																																																																			
☐ Grain	☐ Over/Under tolerance																																																																			
☐ Weld	☐ Part Incorrect																																																																			
☐ Wrong Stock Pulled	☐ Part Lost/Missing																																																																			
☐ Out of Sequence	☐ Part Moved																																																																			
☐ Off-set	☐ Drawing																																																																			
☐ Mislabeled	☐ Finish																																																																			
☐ Fit/Function	☐ Misread																																																																			
☐ Misaligned/off center	☐ Turning Sequence																																																																			
OTHER : _____																																																																				

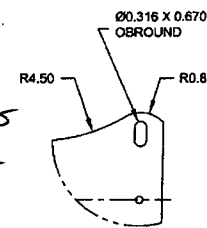
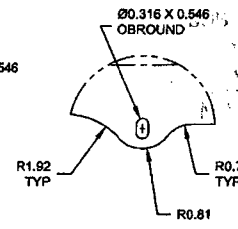
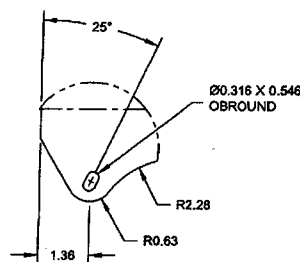
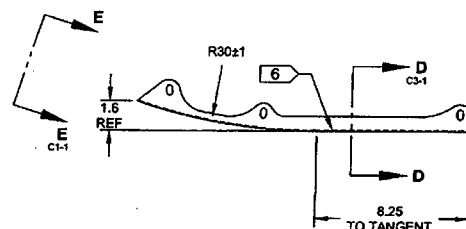
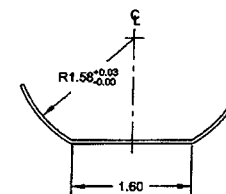
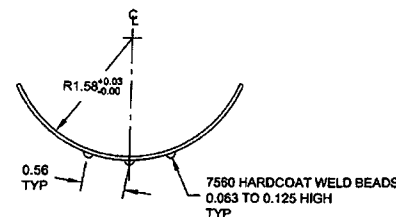
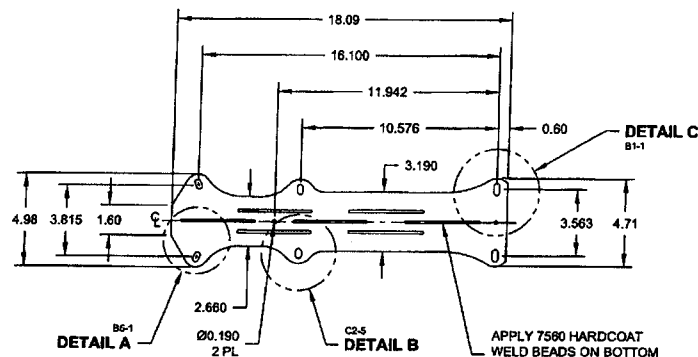
DART AEROSPACE LTD		Work Order:	139002
Description: Wearplate		Part Number:	D3319-3
Inspection Dwg: D3319	Rev: C	Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.190	+0.005/-0.001	Ø.192	/		V-D-01	
Ø0.500	+0.006/-0.001	Ø.499	/		V-D-02	
0.316	+/-0.010	.317	/		Tape	
0.607	+/-0.010	.609	/			
2.94	+/-0.030	2.946	/			
2.69	+/-0.030	2.697	/			
3.527	+/-0.010	3.525	/			
4.52	+/-0.030	4.517	/			
5.063	+/-0.010	5.057	/			
6.16	+/-0.030	6.160	/			
0.60	+/-0.030	.601	/			
8.690	+/-0.010	8.693	/			
30.790	+/-0.010	30.790	/			
52.88	+/-0.030	52.88	/			
62.770	+/-0.010	62.770	/			
74.420	+/-0.010	74.420	/			
75.52	+/-0.030	75.52	/			
0.050	+/-0.010	.045	/			

Measured by:	<i>bc</i>	Audited by:	DAS 9	Preliminary Approval:	
Date:	15/12/23	Date:	15-12-23	Date:	

Rev	Date	Change	Revised by	Approved
A	07.07.18	New Issue	KJ/JLM	
B	12.05.15	Dimensions updated per Dwg Rev C	KJ	



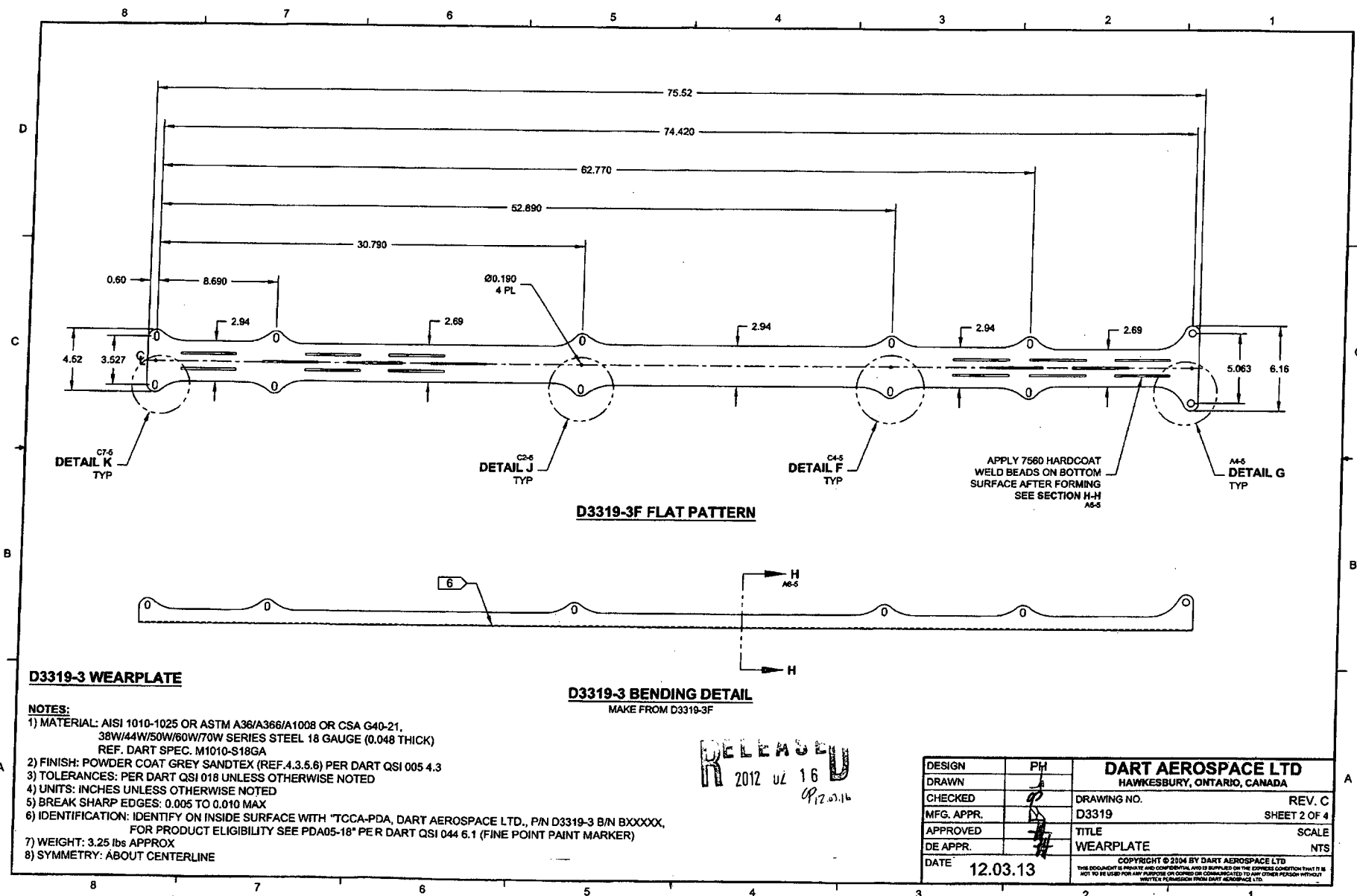
D3319-1 WEARPLATE

NOTES:

- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W SERIES STEEL 18 GAUGE (0.048 THICK) REF. DART SPEC. M1010-S18GA
- 2) FINISH: POWDER COAT GREY SANDTEX (REF.4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY ON INSIDE SURFACE WITH "TCCA-PDA, DART AEROSPACE LTD., P/N D3319-1 B/N BXXXXX, FOR PRODUCT ELIGIBILITY SEE PDA05-18" PER DART QSI 044 6.1 (FINE POINT PAINT MARKER)
- 7) WEIGHT: 0.90 lbs APPROX
- 8) SYMMETRY: ABOUT CENTERLINE

RELEASED
2012-03-16
PER ECN 12-946 9/12-03.16

C	UPDATE TO CURRENT STANDARDS IAW QSI 043; CLOSED AFT MOST HOLE ON -3/51-7 (REF DETAIL G). SEE NCR12-547.	MB	12.03.13
B	WIDEN HOLES, REDUCE WIDTH ON -3/51-7	PH	05.06.06
A	NEW ISSUE	PH	04.09.24
REV.	DESCRIPTION	BY	DATE
DESIGN	PH	DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D3319	SHEET 1 OF 4
APPROVED		TITLE	SCALE
DE APPR.		WEARPLATE	NTS
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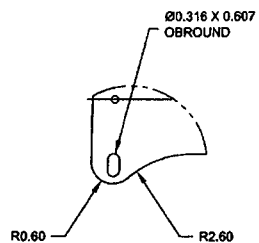
NOTES:

- D3319-7F FLAT PATTERN**

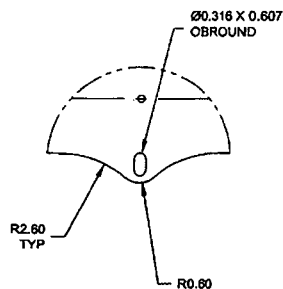


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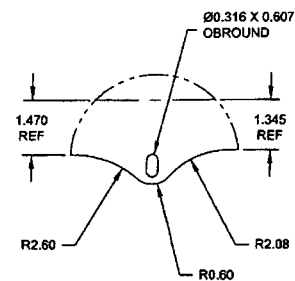
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DRAWN	<i>[Signature]</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. C
MFG. APPR.	<i>[Signature]</i>	D3319	SHEET 3 OF 4
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	WEARPLATE	NTS
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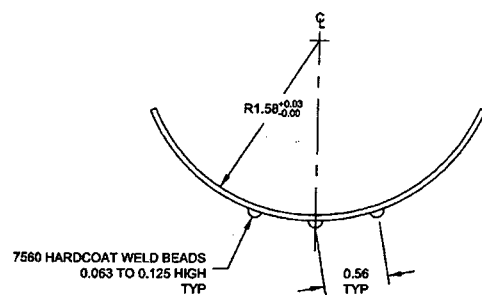
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C4-3
C6-3
SCALE 2X



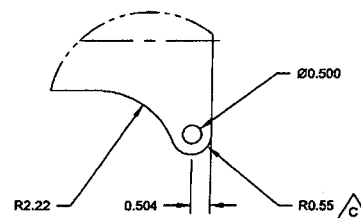
DETAIL F B3-2
SCALE 2X



DETAIL J B8-2
C7-3
SCALE 2X



SECTION H-H B4-2
B3-3
B6-3
SCALE 4X



DETAIL G B8-2
C2-3
C6-3
SCALE 2X

RELEASED
2012-02-16
12.03.16

DESIGN	PH	DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO. D3319	REV. C
MFG. APPR.			SHEET 4 OF 4
APPROVED		TITLE WEARPLATE	SCALE NTS
DE APPR.			
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